GWSA Regulations Stakeholder Meeting

Massachusetts Department of Environmental Protection

November 2, 2016 - Boston, MA

November 3, 2016 - Worcester, MA

Agenda

- 10:00 AM – 11:00 AM: Overview
- **11:00 AM – 12:00 PM: Gas-insulated switchgear**
- 1:00 PM – 2:00 PM: Requirements for transportation
- 2:00 PM – 3:00 PM: State vehicle fleet
- 3:00 PM – 4:00 PM: Methane leaks from the natural gas distribution system
- 4:00 PM – 5:00 PM: General stakeholder discussion

GWSA Regulations Stakeholder Meeting

Massachusetts Supreme Judicial Court:

"…this court concluded that the plain language of [GWSA, Section 3(d)] requires the department to promulgate regulations that address multiple sources or categories of sources of greenhouse gas emissions, impose a limit on such emissions that may be released, limit the aggregate greenhouse gas emissions that are released from each group of regulated sources or categories of sources, set greenhouse gas emissions limits for each year, and set limits that decline on an annual basis."

May 17, 2016

GWSA Regulations Stakeholder Meeting

Global Warming Solutions Act of 2008

Section 3(c):

"Emissions levels and limits associated with the electric sector shall be established by the executive office and the department, in consultation with the department of energy resources, based on consumption and purchases of electricity from the regional electric grid, taking into account the regional greenhouse gas initiative and the renewable portfolio standard."

Section 3(d):

"The department shall promulgate regulations establishing a desired level of declining annual aggregate emission limits for sources or categories of sources that emit greenhouse gas emissions."

Reducing Sulfur Hexafluoride (SF_6) Emissions from Gas-Insulated Switchgear

Executive Order 569:

"The Department of Environmental Protection shall promulgate final regulations that satisfy the mandate of Section 3(d) of [GWSA and the SJC Kain decision] by August 11, 2017, having designed such regulations to ensure that the Commonwealth meets the 2020 statewide emissions limit mandated by the GWSA….The Department of Environmental Protection shall:

…consider limits on emissions from, among other sources or categories of sources, the following: … (iv) gas insulated switchgear…"

September 16, 2016

Reducing Sulfur Hexafluoride (SF_6) Emissions from Gas-Insulated Switchgear

Massachusetts Supreme Judicial Court on current SF_6 regulation:

"…the imposition of declining rates falls short of complying with the requirement of § 3 (d) that regulated sources are subject to a source-wide volumetric cap on emissions. A rate, by nature of being a ratio, is different from a limit, which sets a value that cannot be exceeded. Because the sulfur hexafluoride regulations impose maximum rates as opposed to maximum limits on sulfur hexafluoride emissions, an emitter permissibly could increase its sulfur hexafluoride emissions by installing additional GIS. Thus, the regulations control only the rate of leakage permissible, and not the collective amount of sulfur hexafluoride emissions that leak from GIS in the Commonwealth in a given year."

May 17, 2016

Reducing Sulfur Hexafluoride (SF_6) Emissions from Gas-Insulated Switchgear

- What is gas-insulated switchgear (GIS)?
  - Equipment used in high-voltage electrical systems to control the flow of electrical current
  - SF_6 - excellent insulator; often used in GIS
- How does SF_6 relate to overall GHG emissions in MA?
  - In 2013, SF_6 emissions from GIS totaled 0.08 tons of CO_2e
    - Equivalent of 0.1% of statewide GHG emissions in 2013
- Existing SF_6 leakage rate regulation helps achieve 2020 CECP goal of 25% GHG emissions reductions

Reducing Sulfur Hexafluoride (SF_6) Emissions from Gas-Insulated Switchgear

- Current Regulation: 310 CMR 7.72
- Promulgated in 2014, took effect January 1, 2015
  - Sets a mandatory company-wide declining leak rate of SF_6 from GIS equipment (1% in 2020)
  - Sets a maximum leak rate of 1% for newly purchased GIS
- Applies to the large utilities (National Grid, Eversource)
- New equipment requirement applies to all owners of GIS

Sulfur Hexafluoride (SF_6) – Overview of Draft Amendments

- Draft retains declining rate and requirements for new equipment
- Regulated entities and threshold criteria remain unchanged
- Draft creates declining annual caps

Sulfur Hexafluoride (SF_6) Draft Company-Specific Caps

Maximum Annual SF_6 Emissions – National Grid	
Calendar Year	**Maximum Allowable SF_6 Emissions (lbs.)**
2018	2,644
2019	2,082
2020	1,457

Maximum Annual SF_6 Emissions – Eversource	
Calendar Year	**Maximum Allowable SF_6 Emissions (lbs.)**
2018	3,340
2019	2,632
2020	1,841

Sulfur Hexafluoride (SF_6) Draft Aggregate Cap

Maximum Annual SF_6 Emissions – Aggregate	
Calendar Year	**Maximum Allowable SF_6 Emissions (lbs.)**
2018	5,984
2019	4,713
2020	3,299

- Aggregate cap equals sum of companies' individual caps
- Calculated based on 2015 nameplate capacity of GIS equipment, projected deployment of new equipment, and existing requirement of declining leak rates
- After 2020, the leakage rate would remain in place and allow for growth in GIS capacity

Sulfur Hexafluoride (SF_6) – Key Questions

- Are the draft emission caps set at appropriate levels?
- Should the regulation include numerical emission caps or a cap-setting formula?
- Should the regulation incorporate an option for joint compliance based on the aggregate cap?

Information posted at:

http://www.mass.gov/eea/agencies/massdep/climate-energy/climate/ghg/reducing-sf6-emissions.html

http://www.mass.gov/eea/agencies/massdep/air/climate/section3d-comments.html

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